Application. Serial No. 10/747,968
Response to the Office Action of August 22, 2008

Our File: 38898-0139 CCC

## Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

## Listing of Claims:

1-14. (cancelled)

15. (previously presented) A network comprising:

a backbone;

at least two provider edge devices connected to and working with said backbone; and

layer-1 VPN information and layer-2 VPN information processed by one of said at least two provider edge devices;

a layer-2 provider edge device attached to said one of said at least two provider edge devices, said layer-2 provider edge device configured to advertise said layer-2 VPN information to said one of said at least two provider edge devices,

wherein said one of said at least two provider edge devices is configured to use a discovery mechanism for distributing said layer-2 VPN information.

16. (currently amended) A network as claimed in claim 15 wherein said at least two provider edge devices are ~~GVPN-based~~ Generalized Virtual Private Network based.

17. (original) A network as claimed in claim 16 wherein said at least two provider edge devices are a part of a network of a first service provider.

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18. (original) A network as claimed in claim 17 further comprising a second service provider having its own network, said second service provider being a customer of said first service provider.

19. (previously presented) A network as claimed in claim 18 wherein both layer-1 VPN auto-discovery and layer-2 VPN auto-discovery are carried out within said network of the first service provider.

20. (original) A network as claimed in claim 15 wherein said backbone includes a portion of the Internet.

21. (new) A network comprising:

a first provider edge device in a first carrier network, said first carrier network employed by a layer-1 VPN service provider;

a second provider edge device in a second carrier network, said second carrier network employed by a different service provider, said second provider edge device configured to employ a BGP session to transmit layer-2 Virtual Private Network (VPN) information to said first provider edge device, where said layer-2 VPN information has been created within said second carrier network.

22. (new) A network as claimed in claim 21 wherein said first provider edge device is configured to execute an auto-discovery mechanism for said second carrier network.

23. (new) A network as claimed in claim 22 wherein said first provider edge device is configured to carry out, within said first carrier network, layer-1 VPN auto-discovery and layer-2 VPN auto-discovery.

24. (new) A network as claimed in claim 23 further comprising a third provider edge device in said first carrier network wherein a backbone separates said first provider edge device and said third provider edge device.

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25. (new) A network as claimed in claim 24 wherein said backbone includes a portion of the Internet.

26. (new) A network as claimed in claim 24 wherein said second provider edge device is a layer-2 VPN-based provider edge device.

27. (new) A method for distributing layer-2 VPN information comprising:

at a first layer-1 provider edge device:

receiving layer-2 VPN information; and

distributing said layer-2 VPN information to a second layer-1 provider edge device using BGP sessions and a discovery mechanism; and

at said second layer-1 provider edge device:

passing said layer-2 VPN information to an attached layer-2 provider edge device.

28. (new) A method as claimed in claim 27 wherein said receiving said layer-2 VPN information comprises receiving advertising.

29. (new) A method as claimed in claim 28 wherein a mechanism for said advertising comprises at least one inter-carrier BGP session.

30. (new) A method as claimed in claim 29 further comprising setting up, at said first layer-1 provider edge device, said inter-carrier BGP session to another provider edge device that is a selected one of the following: a layer-2 VPN-based provider edge device, and a layer-2 and layer-3 VPN-based provider edge device.

31. (new) A method as claimed in claim 30 wherein said another provider edge device is a part of a provider network and said first layer-1 provider edge device is a part of a sub-provider network.

32. (new) A method as claimed in claim 31 wherein said first layer-1 provider edge device and said second layer-1 provider edge device are separated by a backbone.

33. (new) A method as claimed in claim 32 wherein said backbone includes a portion of the Internet.

34. (new) A method as claimed in claim 33 wherein said another provider edge device interfaces with a VPN.